TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION Effective January 1, 2012
WIN-1513

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **November 2013**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Series 1650 HP Vinyl Double Hung Windows, New and Replacement Windows, Impact Resistant, manufactured by

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650 West Market Street
Gratz, PA 17030-0370
Telephone: (717) 365-3300

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The Series 1650 HP windows are vinyl double hung windows. The vinyl double hung windows evaluated in this report are individual, impact resistant windows. This product evaluation report is for vinyl double hung windows based on the following tested constructions:

General Description:

System	Description	Label Rating
1	Series 1650 HP Vinyl Double Hung Window; FIN; (X/X)	H-R50 52 x 72 AAMA 506
2	Series 1650 HP Vinyl Double Hung Window; FINLESS; (X/X)	H-R50 52 x 72 AAMA 506

Product Dimensions:

System	Overall Size	Interior Sash Size	Exterior Sash Size
3	52 1/8" x 72"	48 1 1/16" x 35 7/16"	47 15/16" x 34 9/16"
4	52 1/8" x 72"	48 3/4" x 35 3/8"	47 7/8" x 34 3/4"

Glazing Description:

System	Glass Construction [1]	Glazing Method [2]
1	IG-1	GM-1
2	IG-1	GM-1

Note: [1] See the "Glass Construction Key" for the glazing construction.
[2] See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

IG-1: Both sashes contain sealed insulating glass units. The sealed insulating glass units are comprised of a double strength ($\frac{1}{8}$ ") annealed glass lite and a laminated glass unit separated by an aluminum reinforced butyl spacer system. The laminated glass unit is comprised of two double strength ($\frac{1}{8}$ ") annealed glass lites with a 0.090" Solutia PVB interlayer. The glass thickness used in the insulating glass unit of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The insulating glass units are set from the exterior against a bed of structural silicone sealant. A rigid vinyl snap-in glazing bead secures the insulating glass units in place.

Frame Construction: The frame members are manufactured from extruded PVC (vinyl). The frame corners are mitered and welded construction. The sill utilizes a high water adaptor that is snapped onto the sill.

Sash Construction: The sash members are manufactured from extruded PVC (vinyl). The sash corners are mitered and welded construction.

Reinforcement: The exterior meeting rail, the interior meeting rail, the sash stiles, the interior sash bottom rail, and the exterior sash top rail utilize wood reinforcement. The interior meeting rail locks utilize extruded aluminum reinforcement. The reinforcement extends the length of the members.

Hardware:

- Surface mount plastic tilt latches; Two (2) required; Located at the ends of the top rail and the interior meeting rail.
- Surface mount tilt latch with J-hook; Two (2) required; Located at the ends of the top rail and the interior meeting rail.
- Constant force balance; Four (4) required; Two (2) per jamb.
- Metal tilt pins; Four (4) required; Located at the ends of the bottom rail and the exterior meeting rail.
- Metal lock with adjacent keeper; Two (2) required; Located on the meeting rail.

Product Identification:

System 1: A certification program label (AAMA) will be affixed to the window. The certification program label includes the manufacturer's code name (MTL-2); product name: **1650 HP DH (FIN)**; performance characteristics; the approved inspection agency (AAMA); and the applicable standards: AAMA/WDMA/CSA 101/I.S.2/A440-05 and AAMA 506.

Product Identification (continued):

System 2: A certification program label (AAMA) will be affixed to the window. The certification program label includes the manufacturer's code name (MTL-2); product name: **1650 HP DH (FINLESS)**; performance characteristics; the approved inspection agency (AAMA); and the applicable standards: AAMA/WDMA/CSA 101/I.S.2/A440-05 and AAMA 506.

LIMITATIONS

Design pressures:

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressures (psf)
1	52 1/8	72	± 50
2	52 1/8	72	± 50

Impact Resistance: These assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I zone** and the **Seaward zone**. The assemblies passed Missile Level D specified in ASTM E 1996-05. The assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These assemblies will not need to be protected with an impact protective system.

Acceptance of Smaller Assemblies: Window assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General: The window assembly shall be installed in accordance with the manufacturer's installation instructions. Detailed drawings and installation instructions are available from the manufacturer.

Installation:

System 1 (New Construction): The wall framing shall be minimum Spruce-Pine-Fir dimension lumber. The window is secured to the wall framing using the fin of the window frame with minimum No. 6 screws. The fasteners shall be located approximately 2 inches from each corner and approximately 11 inches on center along the perimeter of the window. The fasteners shall be long enough to penetrate a minimum of 1 1/2" into the wall framing members.

System 2 (Replacement Construction): The wall framing shall be minimum Spruce-Pine-Fir dimension lumber. The window shall be mounted to the wall framing members using the frame of the window with minimum No. 8 x 2" screws. Each frame side jamb is secured to the wall framing with fasteners spaced approximately 4 inches from the head and the sill and one (1) at the mid span. No fasteners are required at the head and the sill. The fasteners shall be long enough to penetrate a minimum of 1 1/2 inches into the wall framing members. The window shall be set in a bed of silicone.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.